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## OPEN DISCUSSION

MR. PERCIVAL R. MOSES, Electrical Engineer, New York City:

There is one thing which has not been discussed in connection with private ownership, and that is the question of rates charged for electric current. These rates vary from one cent to fifteen cents in the same community, and are made apparently without regard to the cost of producing the current. This is something that could not occur, either under proper regulation, or absolute municipal ownership. These rates are not based on the cost of service at all, but on so-called competitive conditions.

In a recently published report of the National Electric Light Association, it is stated "We have come to the conclusion that these results (meaning greatest extension of business) can best be obtained by adjusting the various rates to the *value* of the service rendered." This, you see, has nothing to do with the cost of performing the service. In fact, the rates are to be based on what the traffic will bear, and not on the cost of the service. This is a destructive principle. It means that if we take the transportation facilities for an example and a firm has its own omnibuses or its own carriages, it would be entitled to lower rates of transportation, or if a firm put up its own power plant, it would be entitled to lower rates on electricity, or if a gas plant to supply its own gas, it should receive lower rates on gas. In fact this is precisely the position taken by the private utility companies. This question seems to me to be one of the most important questions before us in this whole discussion.

I think, too, that the question of regulation of private utilities should be viewed from the point that the city is really the owner of the private utility and should be represented in its direction. I see no reason why the city, as a city, should not be represented in the directorate of a private utility corporation and have as much voice as the owner of the company himself, for in that way alone we can get efficient regulation.

Under the present condition, things are merely a burlesque,

as the public service corporation of New York is, as you know, a mere byword. We have one real commissioner in New York, but the balance of the commission is merely a bumper between the electric companies and the citizens.

For five years the fight has been going on for fair rates in that city, and nothing has been accomplished, because of the obstructive tendency of the commission. These statements may seem very plain, but they are what is in everybody's mind and published in every paper.

**MAYOR HOCKEN:**

We have had a very interesting illustration in our city of Toronto recently of the point which the gentleman from New York raises, and I think it will be of interest to this meeting.

Our hydro-electric power system has been established to sell power at cost. It is operated by a commission of which the mayor is an ex-officio member, and it buys its power from the Provincial Commission, which in turn buys it from a development company at Niagara Falls. Recently a very large contract was made by a company, the Canadian Stewart Company, which is doing a large work in our harbor, and when the Hydro-Electric Commission came to compete for that business, we could not do so successfully, because we would not go below the price to the Canadian Stewart Company, that we are selling to the people of our city, but the competing company, for some reason or other, and I am not going to ascribe any motive to them, made a price for this contract that was lower than the price we have to pay for the raw power from Niagara Falls. The point I want to make is this: where you have a municipal system, it will be operated upon an absolutely fair basis. A privately owned company is seldom operated upon a fair basis, because it sells power to one favored customer for one quarter of the price it is getting from other customers, and is, therefore, continually discriminating against customers, which is not only unfair to our city, but must be very unsatisfactory to all who get their power from that company.

**MR. H. W. ASHLEY, of Rathbun, Jones Engineering Company, Toledo, Ohio:**

There are a number of commissioners of various states present, Mr. Chairman, and I suggest that it would be of great interest to

this audience to know upon what basis these public service companies are authorized to make the rates they now charge, as illustrated a moment ago by the gentleman from Toronto.

It is a course pursued in almost every state to have two meters on one premise, one meter that will register the current that comes from the same engine and the same power house at three cents per kilowatt and adjacent to and immediately alongside, with all the same expenses attached, is another meter which registers at the rate of ten cents. Those rates are authorized by the state public service commissions, some members of which are present, and it would be of great value to this audience, and I as a delegate would like to know upon what theory such rates are charged and upon what principle these rates are authorized.

HON. D. W. WILBUR, Mayor of Poughkeepsie, New York:

I am serving my first term as mayor of Poughkeepsie and the first year of that term. Before I had been in office five months, the contract for street lighting was about to expire, and it became my duty to take up the question of the renewal of the contract. The electric light people voluntarily came before the common council to discuss the question of renewal which they desired to put in force upon the basis of the old contract.

Upon questioning the president of the local company, Mr. Beal, he gave me the following figures as analyzing the cost of producing the current used by the city of Poughkeepsie, their claim being that they were serving the city at cost, and did not desire to make a profit out of the municipality.

These are the figures making up the united cost of a single arc lamp, which costs \$76 per year for burning 4,000 hours or an average of 11 hours per day:

Current delivered to lamp	\$0.0142 kw. hour	\$18.14
Distribution costs	0.0156 kw. hour	19.87
Interest	0.0102 kw. hour	12.94
Depreciation	0.01 kw. hour	12.70
Sundry Expenses	0.005 kw. hour	6.15
Taxes	0.005 kw. hour	6.20
	<u>\$0.06 kw. hour</u>	<u>\$76.00</u>

Figuring this out from the kilowatt hours used, from the standard of lamps in service, it comes to almost exactly 6 cents per

kilowatt hour for the current consumed, whereas it is a well known fact that the electric light and power company in Poughkeepsie is doing precisely the same thing that this gentleman here today stated other power companies are doing in other cities, that is, selling current for power purposes in some instances as low as 1 cent, in others  $1\frac{1}{2}$  cents, and  $1\frac{3}{4}$  cents per kilowatt hour.

The question I want to bring to the attention of this assembly is this: If the current delivered to the lamp costs \$0.0142 per kilowatt hour, how can they sell current at 1 cent to power users? The \$18.14 per year for the current delivered takes in station charges, coal maintenance, etc., which is expressed per kilowatt hour at \$0.0142. They are selling current to certain users at less than the price they claim it costs to deliver it to the lamp.

If they can do that, why cannot they do the same thing with the city? In other words is it just for any utilities corporation to charge the municipality 6 cents per kilowatt hour, when it is selling current to power users or traction companies at 1 cent per kilowatt?

That is a subject I would like to have some light on. I may say that I have not yet renewed the contract. The subject is still under discussion, and I am very anxious if any public service man is here to have him tell me if I am on the wrong line in trying to get this particular corporation to establish a lower rate. I would like information, and my one desire is to treat this problem with absolute fairness, both to the city and to the public service corporation.

MR. CHARLES DAY, of Day & Zimmermann, Philadelphia:

I believe a simple illustration will serve to show why different rates for different classes of service are consistent with the theory of uniform rates from the standpoint of cost plus a reasonable profit.

Certain operating expenses, such as those incurred through reading meters, making out bills, collecting accounts, as well as many other charges, do not vary in direct proportion to the amount of current consumed. For example, it costs no more to make out a bill for a large power consumer than for a residential customer. Then again, there are other items of cost which increase only after the consumption exceeds a certain amount, so that they are also stationary within fixed limits. For example, the interest on money which must be spent to connect up a customer is independent

of current used by the customer until the consumption reaches a point which requires the installation of larger wires, meter, etc.

Let us assume that charges of this kind, which might be termed "stationary charges," for a given class of customers amount to 90 cents per month per customer and that 3 cents per kilowatt hour would yield a fair return upon those costs which increase in direct proportion to the current used. Then if 10 kilowatt hours were consumed by one customer during a given month, the bill would be 90 cents plus 30 cents or \$1.20, which would be equivalent to 12 cents per kilowatt hour. If, however, this customer used during a subsequent month 100 kilowatt hours, then his bill would be 90 cents plus \$3 or \$3.90, which would be equivalent to 3.9 cents per kilowatt hour.

For very large consumers, the stationary costs, although greater than for small consumers, are almost nominal as compared to the current costs. It is for this reason that large consumers are fairly entitled to much lower rates when considered from the standpoint of kilowatt hours, than residential customers. An important factor in this connection, which must not be overlooked, is that the small consumer usually takes current either during peak periods or, in any event, but for a short part of the day, whereas the large consumer uses current for a much larger proportion of the day and off peak. In the latter case it must be obvious that the interest and depreciation charges per kilowatt hour incurred through the operation of the necessary power plant equipment, lines and transformers would be much smaller than in the former. Except for this condition, the charges relating directly to the cost of current are no greater for a residential customer than for the largest power consumer.

It must be apparent, therefore, that rates cannot be equitable to all concerned unless they conform to the characteristics of operating costs, some of which vary with the number of customers, some with the expenditures which must be made in order to serve the customer and others in direct proportion to the amount of current which is sold. General argument and discussion will not lead to any useful result. What we must have is an intimate knowledge of the factors which comprise operating expenses in each case. I have endeavored to emphasize in my paper the paramount importance of this basis of rate-making.

When questions of this kind, which arise through the routine management of public service properties, are solved in a manner which will accord directly with the facts at issue, then the way will be paved for the prompt and satisfactory solution of many of the broad and less tangible issues which have been discussed by the previous speakers.

MR. ASHLEY:

I understand from your paper and from the tone of your remarks that you favor a basis of rates, or a principle of rates by the public service corporation, that would be figured on the cost of the service. Is that right?

MR. DAY:

I think, of course, that that is the principle that everybody seeks to have in effect. Argument would be useless on the method of reaching that basis.

MR. ASHLEY:

What I did inquire, and what I rise to make more plain is, I wanted some member of some commission to tell me why two meters might be placed in my residence, one registering current at 3 cents and another registering current at 10 cents; one of them may be used for cooking and the other for light, but both consuming the same amount of current and taking the same expense to read the meter, and the same amount of wire to carry the current. Why is one authorized at 3 cents and another at 10 cents?

MR. DAY:

Of course, the only justification in that case would be the hours of burning.

MR. ASHLEY:

There isn't any difference in hours, because they all burn at the same time. My dinner comes to me right where I want it—under the light.

MR. DAY:

Well, then, on the basis of reasonable service, under the conditions you state, those two rates cannot be reconciled.

MR. ASHLEY:

If we could agree that the rates of public service corporations selling light and power could be made up on the basis of cost of service, or classes of service, which is probably the only practical means of dealing with the question, the problem would very largely solve itself. It is not a very difficult question, I take it, to take these three, four or five classes of service, and the different factors that enter into them, and determine a relative and just rate or price based on the relative cost of that service?

MR. DAY:

Unfortunately it is an enormous task to get the information, but it is not an insurmountable one.

MR. ASHLEY:

We are agreed then upon the basis; it is not as announced in the meeting of the National Electric Light Association,—on the basis of all the traffic will bear,—but on the basis of what the costs are?

MR. DAY:

Absolutely on the basis of cost, plus a reasonable profit.

MAYOR HOCKEN:

Mr. Day, in speaking of rates, I thought perhaps was referring to and answering what I had said. So I would like to quote for his information and for the information of the delegates, our rates for alternating current power, which are identical in principle to all our different classes of power. We make a charge to the ordinary small manufacturer of \$1.35 per horse power per month, or 10 horse power, whether or not the current is used, plus \$1 per horse power per month for the excess consumption, plus a unit charge of  $1\frac{1}{2}$  cents per kilowatt hour for the first 50 hours' service, plus 1 cent per kilowatt hour for the next 50 hours' service, plus  $\frac{1}{2}$  cent per kilowatt hour for all excess service, subject to discounts for prompt monthly payment and according to duration of contract, as above mentioned.